What is claimed is;

1. deleted

2. An etching method for plasma-etching an SiO_2 film layer covering an SiN_x film layer formed at a workpiece placed inside an air-tight processing chamber by raising to plasma a processing gas induced into said processing chamber, comprising;

a first step in which said SiO_2 film layer is etched by using a mixed gas containing at least C_4F_8 and CO as said processing gas; and

a second step in which a switch is made to a mixed gas containing at least C_4F_8 and CH_2F_2 to be used as said processing gas to etch said SiO_2 film layer immediately before said SiN_x film layer becomes exposed.

3. An etching method for plasma-etching an SiO_2 film layer covering an SiN_x film layer formed at a workpiece placed inside an air-tight processing chamber by raising to plasma a processing gas induced into said processing chamber, comprising;

a first step in which said SiO_2 film layer is etched by using a mixed gas containing at least C_4F_8 and CO as said processing gas; and

a second step in which a switch is made to a mixed gas containing at least C_4F_8 and CH_2F_2 to be used as said processing gas to etch said SiO_2 film layer immediately after said SiN_x film layer becomes exposed.

4. deleted

5. deleted

6. deleted

7. deleted

8. (amended) An etching method according to claim 2 or 3, wherein;

said mixed gas containing at least C_4F_8 and CH_2F_2 further contains an inert gas.

9. An etching method according to claim 2 or 3, wherein;

said mixed gas containing at least C_4F_8 and CO further contains an inert gas.